

Conference Abstract

Using ontologies to explore floral evolution in a non-model plant clade

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Abstract

The ability to successfully address the complex, multidimensional process of plant character evolution requires approaches that integrate across domains: genetics, evolution, development, and ecology. Additionally, in order to understand the patterns of plant character evolution across a broad phylogenetic scale, we must continue to extend beyond current model organisms and identify new candidate genes implicated in phenotypic evolution. I will explore the potential of ontologies to link the phenotypes and developmental processes of non-model plant clades to underlying candidate genes identified from the model plant *Arabidopsis*, with the overall goal of generating candidate gene hypotheses in non-model plants. This presentation will explore the process of building an ontology specific for a non-model clade which can be integrated with existing ontologies and repositories for model plants, using the genus *Tropaeolum*, commonly known as nasturtiums. As well as highlighting the resources and pipelines that facilitate the development of an ontology in a non-model clade, I will also discuss the broader challenges and the potential inherent in an ontological approach.

Keywords

Ontology, Character Evolution

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